

OPERATING PROCEDURE

XA 7024

62-145-S1

NOTE : If during any of the following procedures, the machine fails to operate as prescribed, go to the “EMERGENCY PROCEDURES” which follow and immediately notify the X-ray System Supervisor, Grace Lau, Bldg. 62, Room 139.

1. Sign into the logbook.
2. Turn on the Water Chiller Pump. The orange “FULL” light will turn on.
3. Insert the X-ray key into the lock and turn the key clockwise to the ON position.
4. Turn on the X-rays:
 - a. Press the yellow X-ray power button. Within a few seconds, the green X-ray button will light up.
 - b. Press the green X-ray button. The red X-ray button will light up, and the X-ray ON warning lights will light up indicating that X-rays are being produced.

****X-RAYS ARE ON WHEN X-RAY ON WARNING LIGHTS ARE ON****

5. Set the desired kV.
Press and hold the kV button to display kV and adjust the kV dial until the desired kV is displayed.
(DO NOT EXCEED 40kV)
Release the kV button.
6. Set the desired mA.
Adjust the mA dial until desired mA is displayed. (DO NOT EXCEED 30mA).
7. Insert (or change) the sample :
 - a. Press the WINDOW SHUT button and check to see that the red lights on the X-ray tube are off, indicating that the window is closed.
 - b. Slowly open the door and insert or change your sample.
 - c. Gently close the door.
 - d. Pass the ID card (prox key) in front of the card reader in the machine and wait for the small green light close to the reader to the. The light will be on for 30 seconds. While the light is on :

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- e. Press the WINDOW OPEN button and check to see that the red lights on the X-ray tube are on, indicating that X-rays are striking the sample.
 - f. Use the computer to perform your diffraction experiment(s).
8. Shutdown Procedure
- a. Press the WINDOW SHUT button. Remove sample.
 - b. Reduce the mA to minimum (check the meter indication).
 - c. Reduce the kV to minimum (check the meter indication).
 - d. Turn off X-rays by pressing the red X-ray power button. The X-RAY ON warning lights and the red X-ray power button light will turn off.
 - e. Turn the X-ray key to the OFF position and remove the key.
 - f. Turn off the Water Chiller Pump. The orange "FULL" light will turn off.
 - g. Log out of Logbook.
 - h. Return the X-ray key to Grace Lau, Rm 139.